

**Hurricane Season Opens with Conference:** Technology and risk are watchwords for the 1996 hurricane season that begins June 1, as vulnerable U.S. coastal populations brace for a seesaw season of storms. Robert W. Burpee, director of NOAA's National Hurricane Center in Miami, told hurricane specialists, emergency managers and news media gathered for a seasonal preview that while the nation's forecast capability continues to improve with the introduction of new technology and observing systems, rising population in our coastal areas is putting more people at risk.

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"Our ability to accurately predict the track of a hurricane has improved over the past 20 years by about 1 percent per year, while coastal population growth has increased 3 to 4 percent yearly," Burpee said.

NOAA Administrator D. James Baker said that modernization of the National Weather Service continues to receive priority attention as the Federal budget tightens. Baker warned, however, that continued funding for the operational and research components of NOAA is critical, if the agency is to maintain a leading edge in accurately forecasting hurricane track and intensity.

**Ozone Destroying Chemicals Declining:** The total amount of ozone-destroying chemicals in the troposphere (lower

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## Stalemate Produced Two Shutdowns

# FY 1996 Budget Signed

President Clinton has signed the FY 1996 Omnibus Appropriations Act which provides NOAA with new spending authority of \$1.936 billion. This is \$97 million below the FY 1995 enacted level and \$259 million below the President's request for FY 1996. As a result of these levels, 102 NOAA employees have been subject to Reduction-In-Force (RIF) actions.

The final budget does not include the \$7 million proposed in the original plan passed by the Senate for the Global Learning and Observations to Benefit the Environment

(GLOBE) Program, which was backed by Vice President Gore and lead by NOAA. This will affect more than 1,500 schools located in every state that have invested in materials to ensure participation in the program, NOAA officials said.

## Ends Stalemate

The signing of the FY 1996 budget brings to an end the fiscal stalemate between Congress and the White House, which resulted in an unprecedented 17 continuing resolutions to keep Federal operations going, as well as two government shutdowns. ☹



## Giving Tornado Safety a Hollywood Twist

Helen Hunt and Bill Paxton star as meteorologists (really) in the summer blockbuster, *Twister*. NOAA and NWS are using the film's premiere to promote tornado safety. (*Full story and pictures, page 6.*)

## Sec'y Brown Remembered in Ship Dedication, Tree Planting

NOAA remembered Secretary Ron Brown last month in two ceremonies, renaming a NOAA ship in his honor, and planting a blooming dogwood tree outside the Pascagoula, Miss., fisheries laboratory.



(Above) Secretary Brown's widow, Alma Brown, christens the NOAA ship *Ronald H. Brown*, originally to be named *Researcher*, at Halter Marine Inc.'s shipyard in Moss Point, Miss. Behind her, left to right, were son Michael Brown, NOAA Corps director Rear Admiral William Stubblefield, and NOAA administrator D. James Baker.



(Left) Later, the *Ronald H. Brown* was launched into the Intercoastal Waterway.

Dr. Baker (right) and Scott Nichols, chief of the Pascagoula, Miss., fisheries laboratory, help plant a blooming dogwood tree outside the laboratory in honor of Ron Brown. Pascagoula staffers chose the dogwood because it will bloom around Easter time each year, the anniversary of Sec. Brown's death. "We'd like to encourage every NOAA and Commerce building to plant a flowering tree outside their offices in memory of the secretary," said Gladys Reese, a fisheries biologist in Pascagoula. "It would allow us to renew and reflect upon Ron Brown's example, as we go on and continue his great work."



# Environmental Heroes Honored on Earth Day

**D**uring Earth Day 1996 celebrations, NOAA recognized local environmental heroes across the United States for their “tireless efforts to preserve and protect our nation’s environment.” NOAA leadership fanned out to these events to present the awards to the local heroes which were nominated by NOAA employees around the country.

## Georgia

In Savannah, Georgia, the award ceremony was held under bright, blue skies aboard the 133-foot NOAA coastal research vessel *Ferrel*. Assistant Secretary for Oceans and Atmosphere, Doug Hall, presented the local hero awards to Rebecca Shortland, Dr. Matthew Gilligan and Dr. Vernon Henry James. Each has played key roles in the research at Gray’s Reef National Marine Sanctuary.

Flanked by NOAA Corps members in their dress whites, Hall praised the three Georgians for being among those Americans who work every day to “make our environment and our community an even better place to live.”

Shortland is vice president of Coastal Programs of the Georgia Conservancy. Gilligan is professor of marine biology at Savannah State College. Henry is director of the Applied Coastal Research Laboratory at Georgia Southern University.

## Florida

Deep in the heart of the Florida Everglades, three Floridians were honored for their work on behalf of the environment. One of the awards was presented posthumously by NOAA’s Deputy Assistant Secretary for Oceans and Atmosphere, Sally Yozell, during a meeting of Leadership Monroe County in Islamorada. George Barley, a longtime advocate



*NOAA’s Assistant Secretary for Oceans and Atmosphere, Doug Hall (right, at podium), honored environmental heroes at Earth Day ceremonies at the Gray’s Reef National Marine Sanctuary, on the Georgia coast. Also there were sanctuary manager Reed Bohne (rear, right) and NOAA Corps Lt. Cdr. Steve Thompson (in uniform).*

for the restoration of the Everglades, died in a plane crash last June while on his way to make a presentation about his beloved Everglades. Barley was joined in his crusade by his wife, Mary, who also was recognized as a local environmental hero. Nathaniel Reed was also recognized as one who’s fought the Florida sugar industry to help protect the Everglades. Reed held high-level Federal government positions during the Nixon and Ford Administrations.

## California

At Earth Day festivities in Santa Barbara’s Museum of Art, two local heroes, Captain Fred Benko and Peter Howorth were singled out for their work with the Channel Islands National Marine Sanctuary.

Honored as “living examples of those who are meeting President Clinton’s State of the Union challenge to leave our environment safe and clean for the next generation,” Benko and Howorth have led conservation efforts in the Channel Islands Sanctuary. Benko is an active participant in the acclaimed “Los Marineros” marine environment education program which introduces at-risk grade-school students to the marine environment through hands-on learning. Howorth has worked extensively in the Channel Islands and has helped rescue thousands of injured, sick and orphaned marine mammals.

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# Focus On...

## San Francisco Bay Demonstration Project

Smaller government, leaner budgets, less Federal regulation—these trends are challenging agencies like NOAA to fulfill our missions with new creativity and effectiveness. NOAA's National Ocean Service (NOS) is meeting this challenge by exploring new forms of public/private partnership to address complex regional and local problems, the most recent one being in San Francisco Bay.

Eight months ago, the ocean service, guided by Assistant Administrator Dr. W. Stanley Wilson, established the San Francisco Bay Demonstration Project. The multifaceted Project is both a laboratory to explore working relationships with local groups, *and* a means to foster collaboration and efficiency among NOS offices.

"The San Francisco Bay Project is a first major step in working more closely with our local partners in the delivery of NOS services," said Dr. Wilson. "Regional problems are too complex to address with broad programs designed for national implementation. To meet a particular area's needs, these programs must be tailored, with local community input, for that particular geographic area. With this in mind, NOS has already extended the San Francisco Bay concept to Prince William Sound/Cook Inlet and Puget Sound."

### INTEGRATED SUPPORT FOR MARITIME COMMERCE AND COASTAL MANAGEMENT

NOS's mission is to support maritime commerce while ensuring the sustainability of healthy, productive coastal ecosystems. NOS meets this mission by developing information tools for decision making in the coastal zone. The data and information NOS collects for its navigation and positioning programs is the same information about the physical

environment needed by coastal managers. In short, this common data bridges NOS's two primary functions.

A good example of this "bridge" is the Physical Oceanographic Real Time System (PORTS) which provides accurate, real-time current, water level, and other information to mariners and the coastal management community.

To remain competitive, San Francisco Bay ports must accommodate the newest deep draft vessels. While water depths can reach 380 feet at the Golden Gate Bridge, the Bay shallows quickly once inside the headlands. Inside the Bay, the Corps

of Engineers maintains a series of deep draft channels, which require dredging of two- to five million cubic yards annually.

PORTS can help by allowing more effective use of channel depth, with minimal impact on the environment. PORTS will allow vessels to operate in larger tide windows without increasing risk of grounding, and potentially reduce the need for additional dredging.

While PORTS information is collected primarily to support safe shipping, it also has important applications for coastal management. Risks of accidents and hazardous materials spills are reduced when pilots and ship masters can rely on accurate, real-time information. Were a spill to occur, however, PORTS data are essential in organizing an effective response. Other San Francisco Bay Projects activities will



*San Francisco project data and information will help coastal managers and planners analyze land-use changes, restore wetlands such as the China Camp State Park in California's Marin County (above), monitor non-point source pollution and other important activities.*



*The international trend in commercial shipping is toward fewer but larger vessels. With better real-time information on water levels, currents and wind speeds provided by PORTS, the newer, deeper-draft vessels can safely enter San Francisco Bay and load more cargo for export.*

supply historical and contemporary NOS data collected in navigation and positioning programs for coastal management. This information will help with analysis of land-use changes, wetland restoration, monitoring non-point source pollution and many other important coastal management issues.

#### **PARTNERSHIPS WITH LOCAL COMMUNITIES**

However, the San Francisco Bay Demonstration Project is not just

about technology and scientific information, it's also about people

and partnerships. Local community involvement is at the core of the Project—and is required to address regional navigation and coastal management issues effectively. In addition, an active local-NOS partnership will allow the agency to achieve far more, and to be more effective than would be possible working in isolation. Finally, ongoing collaboration with the local community is essential to improving the design and delivery of NOS products and services.

“To help ensure that the Project is as effective as possible in meeting local needs, NOS established an informal, high-level local community advisory group to act as a sounding board for the Project management team,” says David Kennedy, the San Francisco program manager. “Together with the advisory group, we identified the core activities of the project and provided a forum for bringing together maritime and coastal management interests.”

Key partners in the project span the coastal management community and the maritime industry in the Bay Area. The advisory group includes the Bay Conservation and Development Commission (BCDC), the Harbor Safety Committee, the Port of Oakland, a representative from the tanker industry, the Golden Gate Ports Association, and the San Francisco Estuary Institute. Other partners, such as the San Francisco

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## **PORTS Brings a Quantum Advance in Safe Navigation to SF Bay**

On June 11, the National Ocean Service will attempt to place an Acoustic Doppler Current Profiler in more than 300 feet of water beneath the Golden Gate Bridge at the entrance to San Francisco Bay. It will be the final element in a multi-sensor array that will bring a fully function-

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## 'Twister' Premiere Lets NWS Send Safety Messages

After giving the producers of the new movie *Twister* technical assistance on severe weather and tornadoes, NOAA and the National Weather Service are taking advantage of the film's success by using it to promote tornado safety. Here's a few examples:

- In Dallas, NWS staffers gave a total of 22 weather safety presentations at a local theater showing the film to nearly 9,000 people over three days.
- In Jackson, Miss., NWS and the American Red Cross set up tornado safety displays at two theaters.

Other NOAA tornado information was used in a plethora of local television tornado reports, including reports by stations in Tulsa; Dallas; Wichita; St. Louis; Boston; Chicago; Caterville, Ill.; Amarillo; Cleveland; Shreveport, La.; Huntsville, Ala.; Los Angeles; and Charleston, S.C.

NOAA's National Severe Storms Laboratory, a unit of the Office of Oceanic and Atmospheric Research, is very positively portrayed in the movie as the source of severe storm guidance information—a cross between NSSL and a forecast office. While the portrayal of scientific tornado intercepts is quite fantastic, the depictions of the destructive power of tornadoes and their threat to public safety are only too real. NOAA staffers Kevin Kelleher, Harold Brooks, and Dane Konop—all of whom assisted the producers in their portrayals of tornadoes and tornado researchers—are credited as "technical consultants," along with Vince Leonard, a commercial meteorologist hired by the producers. ☺



*The stars of Twister try to escape as a digital tornado destroys a digital farmhouse in this scene from the film.*



*Twister star Bill Paxton tries to stare down a really big tornado. Guess who wins?*

## PORTS a Success in San Francisco Bay

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ing PORTS (Physical Oceanography Real Time System) to one of the most active harbors in the U.S. (fifth in crude oil, fourth in container cargo).

PORTS real-time water levels and current information helps pilots and ship masters maneuver in difficult areas and efficiently load and unload their cargoes.

NOS is converting PORTS in the San Francisco Bay to a 24 hour a day navigation tool that is also designed to provide essential data for oil spill

response and dredging activities. The system will also accommodate non-NOS data so that PORTS can provide valuable information about the physical environment to the coastal management community.

The PORTS technology, designed to provide a quantum advance in safe marine navigation, will be of tremendous value in the high sensitivity environment of the San Francisco Bay and the acquisition of such a system has been a high priority for the Bay Area maritime community. ☺



## Senior Managers Meet in Maryland

# Retreat Focuses on Challenges, Responses

NOAA faces key challenges in the future, and will meet them by reevaluating the agency's themes and direction in the coming years, according to NOAA administrator D. James Baker, in remarks at a NOAA senior managers retreat held in March.

Rather than focusing on declining budgets, as was originally planned, the retreat focused on five areas of challenges and opportunities facing NOAA, and developing action plans to achieve success in those areas. They included:

- finding more common ground among NOAA agencies, allowing

them to work better together;

- communicating better, both inside and outside the agency;
- establishing a NOAA science and research strategy;
- strengthening the agency's inter-governmental relationships, and
- creating a more open budget process.

As these items were discussed, Baker said, the participants reaffirmed the direction of NOAA's current programs. "[We] agreed that NOAA should continue to strive to become the authoritative voice in environmental assessment and resource

management," he said, "and [we] recognized that NOAA has begun to position itself well for the 21<sup>st</sup> century."

During the retreat, participants met in breakout groups to form recommendations on NOAA's future direction. Among the actions to be considered are:

- making internal and external communications a priority
- including a section on research in strategic plan elements
- forming international, national and local strategic alliances
- improving communications between and among NOAA entities. ☺



## America Lights Up as NOAA Watches

This amazing satellite image, derived from 231 separate orbital photos taken by a Defense Department meteorological satellite and processed by NOAA's National Geophysical Data Center, shows America lit up by night, with population centers plainly visible. The precision of the image is so great that it even picked up the lights of offshore oil rigs in the Gulf of Mexico and off the California coast. NGDC has used this type of data, known as Operational Linescan System, for fire detection in the western states, as well as Africa, Asia, and South America. And it proves that, yes, there are people in North Dakota, and they obviously stay up late. ☺

## Baird Named Sea Grant Director

Ocean scientist, educator and businessman Ronald C. Baird has been named director of the NOAA National Sea Grant College Program.

Baird assumed his new position after completing his tenure as vice president of university relations at Worcester Polytechnic Institute.

NOAA administrator D. James Baker called Baird's selection "an exceptional choice."

"Dr. Baird's experience in business and education, as a scientist and college administrator, makes him uniquely qualified to lead Sea Grant, whose continued success in helping to protect and preserve our marine environment hinges on a solid working partnership between business, government and the university research community," Baker said. ☺

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atmosphere) has declined for the first time since humans began producing these substances, according to a NOAA study. This decline is expected to affect the stratosphere, where the ozone layer is found, in a few years.

In findings published in the current issue of *Science*, Stephen A. Montzka and colleagues from the Climate Monitoring and Diagnostics Laboratory in Boulder, conclude that chlorine and equivalent chlorine (chlorine plus bromine) decreased in the troposphere in 1995. The scientists believe this decline has occurred because many nations have limited the production of materials that cause ozone depletion in the stratosphere. This is good news for the

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ozone layer, which has been under attack from ozone-depleting chemicals produced by humans for many years.

**Runoff Pollution Announcements to Air:** As Americans headed to the shores this Memorial Day, they were reminded that the beach really begins in their backyard. A new public service awareness campaign being launched by NOAA and the American Oceans Campaign is designed to draw attention to the simple things people can do in their backyards to help decrease polluted runoff, which eventually enters our coastal waters.

Narrated by AOC president and actor Ted Danson, the public service announcement depicts the things people can do to reduce the pollution coming from their yards and gardens. AOC is a nonprofit, national environmental organization dedicated to the protection and restoration of marine and estuarine ecosystems. ☺

## Environmental Heroes Honored

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### Oregon

At the National Marine Fisheries Service in Portland, Oregon, the local hero award was given to Bill Bradbury, executive director of the grassroots organization For the Sake of the Salmon. Rolland Schmitt, NOAA's Assistant Administrator for Fisheries, told the gathering that Bradbury has been instrumental in "protecting the salmon," the Pacific region's most precious natural treasure. Bradbury has played a key role in bringing disparate groups together for the common goal of restoring and conserving salmon habitats.

### Michigan

At the Muskegon mall in downtown Muskegon, Michigan, six individuals and an organization were singled out for their efforts to improve the water quality of the city's largest waterway, Muskegon Lake. Al Beeton, Director of NOAA's Great Lakes Environmental Research Laboratory (GLERL) in Ann Arbor, presented the awards at the LakeWatch booth. The organization is a coalition of government,

business, industry, conservation, environmental and individuals which teaches citizens how to use standard scientific lake sampling and monitoring techniques to understand and document changes in the biology and chemistry of local lakes in the Muskegon area. The six Muskegon heroes are: Gary Fahrenstiel, who heads GLERL's Lake Michigan Field Station; Jerry Engle, a retired U.S. Foreign Service worker who is one of the original developers of the LakeWatch Program; Theresa Lauber, an original organizer of LakeWatch and Kathy Evans, a program coordinator—both work for the Muskegon Conservation District; and, Chuck Vanderlaan, who teaches aquatic science aboard the Grand Valley State University/Water Resource Institute vessel.

Across the country NOAA and many other Federal government agencies, including President Clinton and Vice President Gore, conducted Earth Day 1996 celebrations to focus on the things that everyday people can do to help preserve and protect our Nation's environment.

—Greg Hernandez ☺

## PORTS in SF Bay

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Marine Exchange, a representative of the maritime services industry, and the San Francisco Bar Pilots Association have also come aboard.

The PORTS technology, designed to provide a quantum advance in safe marine navigation, has been a high priority for the Bay Area maritime community. It will be of tremendous value in the Bay's coastal environment.

—Eliot Hurwitz, Bill Zahner,  
David McKinnie ☺

**NOAA Report** is a monthly publication for NOAA employees from the Office of Public and Constituent Affairs, Washington.

Address comments to:

**Editor**

**NOAA Report**

**Office of Public and Constituent Affairs**  
**14th St. & Constitution Ave. NW**

**Room 6013 HCHB**

**Washington, DC 20230-0001**

202-482-6090 (voice)

202-482-3154 (fax)

**Banyan E-Mail:** jerrys@pa@noaa

**Internet:** jsaff@hq.noaa.gov

**CompuServe:** 70762,3151

Lori Arguelles ... Director, Office of Public &  
Constituent Affairs

Jerry Slaff ..... Editor